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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,328	08/31/2006	Hans-Peter Heuss	016906-0544	9432

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FOLEY AND LARDNER LLP
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WASHINGTON, DC 20007

EXAMINER

WALBERG, TERESA J

ART UNIT	PAPER NUMBER
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3744

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,328	Applicant(s) HEUSS ET AL.	
	Examiner Teresa J. Walberg	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-47 is/are rejected.
- 7) ☒ Claim(s) 7-9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/31/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 11, 12, 14-19, 25, 26, 28-33, 35-43, and 45-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsunoda et al (US 5,582,239).

Tsunoda et al disclose a heat exchanging apparatus and method of making (Fig. 4) having at least one first collecting and/or distributing device (20) for at least one liquid medium, the collecting and/or distributing device (20) being fluidly connected to a plurality of through flow devices (24) through which the medium flows at least in sections, and the collecting and/or distributing device (20) having at least one base device (21b in Fig. 5), one cover device (21a) and one separating device (51) which divides the collecting and/or distributing device (20) into at least two partial spaces (Fig. 5), wherein the base device has at least one projection (on each side of 62 in Fig. 5) which protrudes inward with respect to the collecting and/or distributing device from a predefined plane of the base device (Fig. 5), and at least one section of the separating device is in at least indirect contact with at least one side face of the projection and with at least one section of the plane of the base device (Fig. 5), the inwardly

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protruding projection has at least one side face which forms a substantially right angle with the plane of the base device (Fig. 7), and the separating device is arranged at said right angle (Fig. 5), a plurality of inwardly protruding projections are provided (on each side of 62 and 63 in Fig. 7), the plurality of inwardly protruding projections are arranged substantially in a straight line (Fig. 7), those side faces of the projections which are in contact with the separating device are arranged substantially in a plane (Fig. 5), the plane in which the side faces of the projections are arranged are aligned substantially perpendicular to the plane of the base device (Fig. 5).

With respect to claim 37, Tsunoda et al disclose a method for producing a heat exchanging apparatus (Fig. 4) having the following method steps: producing a base device (21b in Fig. 5) having at least one projection (on either side of 62), applying at least one connecting medium (col. 5, lines 18-19) to at least one side face of the projection, and to at least one section, which adjoins the side face of the projection, of the base device (21b in Fig. 5), arranging the separating device (51) on the base device (col. 4, lines 60-62), the separating device (51) being in at least indirect contact with the base device (21b) and the side face of the projection (Fig. 5).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunoda et al (US 5,582,239).

Tsunoda et al disclose the claimed structure and method with the exception of the thickness of the separating device and the height of the projections. However, it would have been obvious to one of ordinary skill in the art to use any desired measurements for the device in order to adapt it for its intended use.

5. Claims 20-24, 27 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunoda et al (US 5,582,239) in view of Thermal (EP 0 656 517)(cited by applicant).

Tsunoda et al disclose the claimed structure and method with the exception of the passage openings having a slot like profile, the passage openings having inward flanges, and the tubes being flat. However, Thermal discloses a heat exchanger (Fig. 1) with passage openings having a slot like profile (Fig. 2) , the passage openings having inward flanges (Fig. 5), and the tubes being flat (Fig. 1). It would have been obvious to one of ordinary skill in the art in view of Thermal to use slot like passage openings and flat tubes in the heat exchanger of Tsunoda et al , the motivation being to reduce the number of tubes that need to be

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assembled and to provide the passage openings with inward flanges, the motivation being to make the tubes easier to insert.

6. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunoda et al (US 5,582,239) in view of Nagasaka et al (5,236,044).

Tsunoda et al disclose the claimed structure and method with the exception of the base device having at least one lug at its periphery.

However, Nagasaka et al discloses a heat exchanger having lugs (19) to fasten together the upper and lower parts of a heat exchanger header (Fig. 1). It would have been obvious to one of ordinary skill in the art in view of Nagasaka et al to use lugs on the base in the heat exchanger of Tsunoda et al , the motivation being to more securely hold the parts of the header together.

7. Claims 8, 9, 20-24, and 39-47 are objected to because of the following informalities: The listed claims appear to have incorrect dependency. It has been assumed for purposes of this action that claims 8 and 9 were intended to depend from claim 7, claims 20 and 21 were intended to depend from claim 19, claims 22 and 23 were intended to depend from claim 21, claim 24 was intended to depend from claim 23, and claims 39-47 were intended to depend from claim 37. Appropriate correction is required.

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8. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract should be amended to remove the text "the invention relates to" and the legal phraseology "comprises" and "comprising".

9. Claims 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamamoto et al, Haussmann (6,082,448), Haussmann (6,142,217), and Demuth et al are cited to show relevant heat exchanger structure.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teresa J. Walberg/
Primary Examiner, Art Unit 3744

/TW/